

DECISION

ENVIRONMENTAL ASSESSMENT: REDUCING GULL DAMAGE THROUGH AN INTEGRATED WILDLIFE DAMAGE MANAGEMENT PROGRAM IN THE STATE OF MAINE

I. PURPOSE

The United States Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Wildlife Services (WS) program, in cooperation with the United States Fish and Wildlife Service (USFWS) has prepared an Environmental Assessment (EA) to analyze the potential environmental and social impacts to the quality of the human environment from resolving damage, including conflicts and threats, to agricultural resources, property, natural resources, and human safety associated with herring gulls (*Larus argentatus*), ring-billed gulls (*Larus delawarensis*), great black-backed gulls (*Larus marinus*), and laughing gulls (*Larus atricilla*) (hereafter referred to as “gulls” in this document) in Maine. The EA documents the need for gull damage management in the State and assesses potential impacts on the human environment of three alternatives to address that need. WS’ proposed action in the EA would continue an integrated damage management program to fully address the need to manage damage associated with gulls while minimizing impacts to the human environment.

The EA evaluated the issues and alternatives associated with WS’ potential participation in managing damage and threats caused by gulls in the State. The EA was prepared by WS to determine if the proposed action could have a significant impact on the quality of the human environment. Specifically, the EA was prepared to: 1) facilitate planning and interagency coordination, 2) streamline program management, 3) evaluate the potential environmental consequences of the alternatives related to the issues of managing damage caused by gulls, and 4) clearly communicate to the public the analysis of individual and cumulative impacts.

II. NEED FOR ACTION

The need for action arises from requests for assistance received by WS to reduce and prevent damage associated with gulls. WS only conducts gull damage management after receiving a request for assistance. Before initiating gull damage management activities in the State, a Memorandum of Understanding, cooperative service agreement, or other comparable document would be signed between WS and the cooperating entity which lists all the methods the property owner or manager would allow to be used on property they own and/or manage.

WS receives requests for assistance to address a variety of damage issues. For example, gulls pose a threat to aircraft from bird strikes. Agricultural losses occur when gulls consume or trample young crops or blueberries, in addition to threats of disease transmission to livestock associated with fecal material. Gulls may pose a threat to certain drinking water supplies through fecal contamination and are known to nest on rooftops where nesting debris can clog drains or ventilation systems. Threats to natural resources associated with gulls also occur in the State. Gulls are colonial nesters and often compete with other nesting colonial waterbirds for nest sites. Gulls are also known to feed on the eggs and chicks of nesting colonial waterbirds and other shorebirds.

WS’ activities would only be conducted when requested and only when damage or a threat is occurring to agricultural resources, natural resources, property, or posing a threat to human health and safety. WS may also be requested to participate in disease surveillance and monitoring in the event of a disease outbreak or potential outbreak in a gull population.

III. SCOPE OF ANALYSES IN THE EA

The EA evaluates gull damage management under three alternatives to reduce threats to human health and safety and to resolve damage to property, natural resources, and agricultural resources wherever such management is requested by a cooperator. If the analyses in the EA indicates the preparation of an Environmental Impact Statement (EIS) is not warranted and a Finding of No Significant Impact (FONSI) is signed by the decision-maker for the EA, the analyses in the EA would remain valid until WS determines that new needs for action, changed conditions, new issues, or new alternatives having different potential environmental impacts must be analyzed. The analyses in the EA are intended to apply to any action taken by WS to alleviate gull damage or threats of damage that may occur in any locale and at any time within the State of Maine.

The USFWS is a cooperating agency on the EA to analyze cumulative take of those gull species addressed in the EA from the issuance of depredation permits to entities within the State and to ensure compliance with the National Environmental Policy Act (NEPA). The USFWS has jurisdiction over the management of migratory birds and has specialized expertise in identifying and quantifying potential adverse affects to the human environment from bird damage management activities. The analyses in the EA will ensure the USFWS compliance with the NEPA for the issuance of depredation permits for the take of those gull species addressed.

The EA was made available to the public for review and comment by a legal notice published in the *Kennebec Journal* newspaper. A notice of availability and the EA were also made available for public review and comment on the APHIS website at http://www.aphis.usda.gov/wildlife_damage/nepa.shtml beginning on July 9, 2010. A letter of availability was also mailed directly to agencies, organizations, and individuals with probable interest in gull damage management in Maine. The public involvement process ended on August 13, 2010. Two comment letters on the EA were received during the public involvement period. Responses to specific comments are included in Appendix A of this Decision.

IV. DECISIONS TO BE MADE

Based on the scope of the EA, the decisions to be made are: 1) should WS conduct gull damage management to alleviate damage to agriculture, property, natural resources, and threats to human health and safety, 2) should the Migratory Bird Program in USFWS Region 5 issue depredation permits to WS and other entities to conduct gull damage management activities, 3) should WS conduct disease surveillance and monitoring in gull populations when requested by the Maine Department of Inland Fisheries and Wildlife (MDIFW), the USFWS, and other agencies, 4) should WS implement an integrated wildlife damage management strategy, including technical assistance and direct operational assistance, to meet the need for gull damage management in Maine, 5) if not, should WS attempt to implement one of the alternatives to an integrated damage management strategy as described in the EA, and 6) would the proposed action result in adverse impacts to the environment requiring the preparation of an EIS.

V. RELATIONSHIP OF THE EA TO OTHER ENVIRONMENTAL DOCUMENTS

WS has developed a programmatic Final Environmental Impact Statement (FEIS) that addressed the need for wildlife damage management (USDA 1997). The FEIS contains a detailed discussion of the potential impacts to the human environment from wildlife damage management methods and techniques employed by WS, including methods used to manage damage associated with gulls. Pertinent information in the FEIS has been incorporated into the EA and this decision document by reference.

In addition to WS' programmatic FEIS, The Maine Coastal Islands National Wildlife Refuge has issued an EA on the effects of reducing the number of laughing gulls breeding on four islands in Maine to

increase the productivity of Arctic terns, common terns, and roseate terns.

VI. AUTHORITY AND COMPLIANCE

WS is authorized by law to reduce damage caused by wildlife through the Act of March 2, 1931 (46 Stat. 1468; 7 U.S.C. 426-426b), as amended and the Act of December 22, 1987 (101 Stat. 1329-331, 7 U.S.C. 426c). Management of migratory birds, including gulls, is the responsibility of the USFWS under the Migratory Bird Treaty Act (MBTA). As the authority for the management of gulls, the USFWS was a cooperating agency in the development of the EA and provided input throughout the EA preparation process to ensure an interdisciplinary approach according to the NEPA and agency mandates, policies, and regulations. The MDIFW is responsible for managing wildlife in Maine, including gulls. Information from the USFWS and the MDIFW has been provided to WS to assist in the analysis of potential impacts of the three alternatives on gull populations in the State.

The EA and this Decision ensures WS' actions comply with the NEPA, with the Council on Environmental Quality guidelines (40 CFR 1500), and with APHIS' NEPA implementing regulations (7 CFR 372). All gull damage management activities, including disposal requirements, are conducted consistent with: 1) the Endangered Species Act of 1973, 2) the MBTA, 3) Executive Order (EO) 12898¹, 4) EO 13045², 5) EO 13186³, 6) the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), and 7) applicable federal, State, and local laws, regulations and policies, including WS' Directives.

VII. AFFECTED ENVIRONMENT

Upon receiving a request for assistance, gull damage management activities could be conducted on federal, State, tribal, municipal, and private properties in Maine. The areas of the proposed action could include areas in and around commercial, industrial, public, and private buildings, facilities and properties and at other sites where gulls may roost, loaf, feed, nest, or otherwise occur. Examples of areas where gull damage management activities could be conducted are, but are not necessarily limited to: agricultural fields, vineyards, orchards, farmyards, dairies, ranches, livestock operations, aquaculture facilities, fish hatcheries, grain mills, grain handling areas, railroad yards, waste handling facilities, industrial sites, natural areas, government properties and facilities, private properties, corporate properties, schools, hospitals, airports, parks, woodlots, recreation areas, communally-owned homeowner/property owner association properties, wildlife refuges, and wildlife management areas. The affected environment could also include areas where gulls negatively impact wildlife, including threatened and endangered (T&E) species; and public property where gulls are negatively impacting historic structures, cultural landscapes, and natural resources.

VIII. ISSUES ADDRESSED IN THE ANALYSIS OF ALTERNATIVES

Issues related to wildlife damage management were initially identified and defined during the development of WS' programmatic FEIS (USDA 1997). Issues related to gull damage management in Maine were defined and preliminary alternatives were identified through consultation with the USFWS and with the MDIFW. The EA was also made available to the public for review and comment through notices published in local media and through direct notification of interested parties.

¹ Executive Order 12898 promotes the fair treatment of people of all races, income levels, and cultures with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

² Executive Order 13045 ensures the protection of children from environmental health and safety risks since children may suffer disproportionately from those risks.

³ Executive Order 13186 directs federal agencies to protect migratory birds and strengthen migratory bird conservation by identifying and implementing strategies that promote conservation and minimize the take of migratory birds through enhanced collaboration. A national-level MOU between the USFWS and WS is being developed to facilitate the implementation of Executive Order 13186.

Chapter 2 of the EA describes in detail the issues considered and evaluated in the EA. The following issues were identified as important to the scope of the analysis (40 CFR 1508.25) with each alternative evaluated in the EA relative to the impacts on the major issues:

- Issue 1 - Effects on Gull Populations
- Issue 2 - Effects on Non-target Species' Populations, Including T&E Species
- Issue 3 - Effects on Human Health and Safety
- Issue 4 - Effects on Socio-Cultural and Economics of the Human Environment
- Issue 5 - Humaneness and Animal Welfare Concerns of Methods Used by WS

IX. ISSUES CONSIDERED BUT NOT ANALYZED IN DETAIL WITH RATIONALE

In addition to those issues analyzed in detail, several issues were identified during the development of the EA but were not considered in detail. The rationale for the decision not to analyze those issues in detail is discussed in the EA. Those issues not analyzed in detail were:

- Appropriateness of Preparing an EA (Instead of an EIS) For Such a Large Area
- WS' Effects on Biodiversity
- A Loss Threshold Should Be Established Before Allowing Lethal Methods
- Gull Damage Management Should Not Occur at Taxpayer Expense
- Cost Effectiveness of Damage Management Methods
- Effectiveness of Management Methods
- Damage Management Should Be Conducted By Private Nuisance Wildlife Control Agents
- Impacts of Avian Influenza on Bird Populations
- Effects from the Use of Lead Ammunition in Firearms
- Impacts of Dispersing Gulls on People in Urban/Suburban Areas
- A Site Specific Analysis Should be Made for Every Location Where Gull Damage Management Could Occur

X. DESCRIPTION OF THE ALTERNATIVES

The following three alternatives were developed to respond to the issues identified in Chapter 2 of the EA. A detailed discussion of the effects of the alternatives on the issues is described in Chapter 4 of the EA; below is a summary of the alternatives.

Alternative 1 - Integrated Gull Damage Management Program (Proposed Action/No Action)

The proposed action would continue the current program of employing an integrated damage management approach using methods, as appropriate, to reduce damage associated with gulls in the State. An integrated damage management strategy would be recommended and used, encompassing the use of practical and effective methods of preventing or reducing damage while minimizing harmful effects of damage management measures on people, other species, and the environment. Non-lethal methods would be given first consideration in the formulation of each damage management strategy, and would be recommended or implemented when practical and effective before recommending or implementing lethal methods. However, non-lethal methods would not always be applied as a first response to each damage problem. The most appropriate response could often be a combination of non-lethal and lethal methods, or there could be instances where application of lethal methods alone would be the most appropriate strategy.

All methods addressed in Appendix B of the EA could be employed by WS to resolve requests for assistance to manage damage associated with gulls in the State. Using the WS Decision model discussed in the EA, WS would employ methods singularly or in combination in an integrated approach to alleviate damage caused by gulls.

Alternative 2 - Technical Assistance Only

Under the technical assistance only alternative, WS would address every request for assistance with technical assistance only. Technical assistance would provide those persons seeking assistance with information and recommendations on gull damage management that those cooperators could employ without WS' direct involvement in the action. Technical assistance could be employed through personal or telephone consultations and through site visits. Under this alternative, the immediate burden of resolving threats or damage associated with gulls would be placed on those persons experiencing damage. Those persons could employ those methods recommended by WS, could employ other methods, or could take no further action.

Gulls could still be lethally taken to alleviate damage under this alternative when committing or about to commit damage or posing a human health and safety threat in accordance with depredation permits issued by the USFWS and the MDIFW. Similar to Alternative 3, the avicide DRC-1339 would not be available under this alternative to those persons experiencing gull damage. All other methods described in Appendix B of the EA would be available to those persons experiencing damage.

Alternative 3 – No Involvement in Gull Damage Management by WS

Under the no involvement alternative, WS would not be involved with any aspect of gull damage management activities in Maine. All requests for assistance received by WS would be referred to the USFWS, the MDIFW, and/or other entities. The take of gulls could continue to occur under this alternative when damage or threats were occurring in accordance with depredation permits issued by the USFWS and the MDIFW. Most of the methods described in Appendix B of the EA under this alternative to alleviate gull damage and threats would be available under any of the alternatives. The only method that would not be available to manage damage caused by gulls under this alternative would be the avicide DRC-1339.

XI. ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL WITH RATIONALE

Additional alternatives were also evaluated but were not considered in detail in the EA with rationale provided in the EA. The alternatives analyzed but not in detail included:

- Lethal Damage Management Methods Only By WS
- Use of Non-lethal Methods Only
- Compensation for Gull Damage Losses
- Short Term Eradication and Long Term Population Suppression
- Use of Non-lethal Methods before Lethal Methods
- Trap and Translocate Gulls Only
- Reducing Damage by Managing Gull Populations through the Use of Reproductive Inhibitors

XII. MINIMIZATION MEASURES AND STANDARD OPERATING PROCEDURES

Minimization measures are any features of an action that serves to prevent, reduce, or compensate for impacts that otherwise might result from that action. The current WS program, nationwide and in Maine,

uses many such minimization measures and standard operating procedures. Minimization measures and standard operating procedures are discussed in detail in Chapter 5 of WS' programmatic FEIS (USDA 1997) and in Chapter 3 of the EA. Those minimization measures and standard operating procedures would be incorporated into activities conducted by WS when addressing gull damage and threats in Maine under the proposed action alternative (Alternative 1) and when applicable, under the technical assistance alternative (Alternative 2). If the no involvement by WS alternative (Alternative 3) is selected, the lack of assistance by WS would preclude the employment or recommendation of those minimization measures and standard operating procedures addressed in the EA by WS.

XIII. ENVIRONMENTAL CONSEQUENCES FOR ISSUES ANALYZED IN DETAIL

The EA analyzes the environmental consequences of each alternative as that alternative relates to the issues identified to provide information needed for making informed decisions in selecting the appropriate alternative to address the need for action. The following resource values in Maine are not expected to be significantly impacted by any of the alternatives analyzed in the EA: soils, geology, minerals, water quality/quantity, flood plains, wetlands, critical habitats (areas listed in T&E species recovery plans), visual resources, air quality, prime and unique farmlands, aquatic resources, timber, and range. The activities proposed in the alternatives would have a negligible effect on atmospheric conditions including the global climate. Meaningful direct or indirect emissions of greenhouse gases would not occur as a result of any of the alternatives. Those alternatives would meet the requirements of applicable laws, regulations, and Executive Orders, including the Clean Air Act and Executive Order 13514.

Chapter 4 of the EA analyzes the environmental consequences of each alternative to determine the extent of actual or potential impacts on those major issues identified in the EA. The proposed action/no action alternative serves as the baseline for the analysis and the comparison of expected impacts among the alternatives. The analysis also takes into consideration mandates, directives, and the procedures of WS, the USFWS, and the MDIFW. The analyses in Chapter 4 of the EA indicate the potential impacts to the quality of the human environment would be similar across the alternatives.

Issue 1 - Effects on Gull Populations

Gulls that could be taken by WS under the proposed action could be taken by those persons experiencing damage or threats in the absence of WS' direct involvement since the take of gulls can occur when a depredation permit has been issued by the USFWS pursuant to the MBTA and a permit has been issued by the MDIFW. Since the lack of WS' direct involvement does not preclude the taking of gulls by those persons experiencing damage or threats associated with those gull species addressed in the EA, WS' involvement in the taking of those gulls under the proposed action would not be additive to the number of gulls that could be taken by other entities in the absence of WS' involvement. In addition, most non-lethal and lethal methods available for resolving damage or threats associated with gulls would be available under any of the alternatives. The avicide DRC-1339 would be the only method that would not be available under all of the alternatives. The use of DRC-1339 would only be available under the proposed action alternative since the product is only available for use by WS' personnel. Therefore, WS' use of those methods available under all of the alternatives would not be additive to the environmental status quo since those methods could be employed by any entity experiencing damage. Based on the evaluation in the EA and WS' programmatic FEIS (USDA 1997), the availability of DRC-1339 for gulls under the proposed action would not pose significant environmental risks when used according to label requirements.

Under the proposed action, based on a review of previous activities conducted by WS to alleviate gull damage and in anticipation of an increase in requests for lethal take, WS anticipates that future lethal take would not exceed 400 ring-billed gulls, 300 herring gulls, 25 great black-backed gulls, and 50 laughing

gulls annually. In addition, up to 50 ring-billed gull nests, 50 herring gull nests, 25 great black-backed gull nests, and 50 laughing gull nests could be destroyed annually by WS to alleviate damage or threats of damage in Maine. All take by WS would occur pursuant to the allowed take defined under depredation permits issued by the USFWS and the MDIFW. WS may also be requested to assist with sampling and managing the spread of diseases found in gull populations. In the case of a disease outbreak, WS could lethally take gulls for sampling and/or to prevent the further spread of diseases. However, sampling is more likely to occur after a mortality event or after the gulls have been taken to alleviate damage or threats.

WS' take is monitored by comparing numbers of birds killed with overall populations or trends in populations to assure the magnitude of take is maintained below the level that would cause significant adverse impacts to the viability of native species populations (USDA 1997). Magnitude is defined as a measure of the number of animals killed in relation to their abundance. In this analysis, magnitude is evaluated first in terms of total take or population trend, then in terms of WS' proposed annual take of gulls. Magnitude is determined either quantitatively or qualitatively. The quantitative method is more rigorous and used when allowable take, population level, and take data is available. Qualitative methods are based on population trends and take data or regional population trends and population modeling. The analyses in the EA were based on data derived from the Breeding Bird Survey (BBS), the Christmas Bird Count (CBC), and the biological assessment of allowable take.

As was discussed in Chapter 2 of the EA, allowable harvest models for bird species have had a long history of use in the United States, primarily with waterfowl species to determine allowable harvest levels during annual hunting seasons. Although no hunting season exists for gulls, the take of gulls under depredation permits issued by the USFWS and the MDIFW to alleviate damage or threats of damage can occur in the State pursuant to the MBTA (see 50 CFR 21). The USFWS recently prepared Potential Biological Removal (PBR) models using population parameters for ring-billed gulls, herring gulls, great black-backed gulls, and laughing gulls to estimate the allowable take level for those gull species in Bird Conservation Region (BCR) 14 and BCR 30 which are the dominant regions in the northeastern United States where those gull species nest. BCRs are regions that consist of landscapes that have similar bird communities, habitats, and resource issues. Maine lies almost entirely within BCR 14 with only the extreme southeastern portion of the State lying within BCR 30. The gulls present in the State are those gulls likely to migrate from and have breeding colonies throughout BCR 14 and BCR 30 which covers most of the coastal and inland areas of the northeastern United States. Since population estimates and trends for gulls in the State are limited, the PBR models developed by the USFWS for BCR 14 and BCR 30 will be used to analyze potential population impacts since the gulls present in the State are likely those gulls migrating from and nesting in BCR 14 and BCR 30. Data used for the PBR model developed by the USFWS for those gulls addressed in the EA and the results of those models are presented in Chapter 4 of the EA.

Given the close geographical proximity of States in the northeastern United States and given the mobility of gulls, assessing allowable take for each State in the northeast would be difficult. Some concerns arise regarding the use of regional gull population estimates for assessing allowable take in BCR 14 and BCR 30 as opposed to the more specific breeding population estimates in the State. To address those concerns, the analyses in the EA for each species of gulls included the evaluation of proposed take levels as those take levels related to the statewide breeding population and how the proposed take relates to the PBR model for gulls in BCR 14 and BCR 30. Gulls are migratory bird species and the breeding population of gulls estimated at the State-level is only representative of the number of gulls present in a State during a short period of time (breeding season). Colonial waterbird surveys that are conducted at historical nesting sites do not account for migratory gulls that could be present in a State during the migration periods nor do breeding colony surveys account for the population of non-breeding gulls present during the breeding season. Therefore, to better account for the mobility of gulls and the fact that gulls present in the

northeastern United States are likely gulls that nest and migrate through BCR 14 and BCR 30, the USFWS developed models based on the geographical scope of the nesting populations of gulls. In addition, the PBR models developed by the USFWS are based on breeding and non-breeding gulls which are often not included in surveys conducted at colonial nesting sites. Since the take of gulls to alleviate damage can occur throughout the year and not just during the breeding season, a comprehensive model like the PBR that includes non-breeding populations of gulls allows for a more systemic analysis of allowable take on gull populations.

Concerns were also identified regarding the potential for the proposed take of gulls under the proposed action alternative to have adverse affects on breeding colonies in the State, which have shown recent declining trends. Of those gull species addressed in this assessment, only ring-billed gulls do not have breeding colonies in the State. Although nesting start dates vary among the other three gull species in the State, nesting generally occurs from April to June with young present in the nests from May through August. The peak nesting period occurs in May for those gull species nesting in Maine with June through July being the peak time for young to be present in nests. The PBR model developed by the USFWS to estimate allowable take calculated a total population for each gull species using 0.75 non-breeding gulls for every breeding adult. The proportion of non-breeding gulls that have been taken by WS or that would likely be taken by WS under the proposed action alternative is unknown since distinguishing breeding and non-breeding gulls can be difficult based on visual cues once non-breeding gulls have molted into adult plumage.

Gulls lethally taken during those months when nesting is not occurring could represent gulls that nest in Maine (except for ring-billed gulls), gulls that nest elsewhere but are present in the Maine during the migration period, or were non-breeding gulls. Since distinguishing gulls that breed at different sites is not possible (unless banding has occurred), the proportion of WS' estimated take under the proposed action alternative that would represent gulls that nest in the State, that nest outside of the State, or are non-breeding gulls is unknown. Similarly, gulls taken by WS during the nesting season could represent gulls that are nesting in Maine, are nesting in colonies outside of the State but are foraging within the State, or are non-breeding gulls. Therefore, the PBR models allow for the most comprehensive approach to analyzing allowable take levels for gulls that nest in and migrate through BCR 14 and BCR 30, which includes Maine.

Ring-billed Gull Population Impact Analysis

The Mid-Atlantic, New England, Maritime (MANEM) Regional Waterbird Plan (2006) reports the populations of ring-billed gulls in the northeastern United States have increased at a rate of 8% to 11% per year since 1976, with a regional breeding population of 40,844 gulls in 13 colonies reported in the 1990s. The overall regional population of ring-billed gulls in BCR 14 and BCR 30 is estimated at 54,000 (see Chapter 4 of the EA). No breeding population estimates are currently available for Maine since ring-billed gulls are not known to nest in the State. However, ring-billed gulls do have a year round presence and can be observed throughout most of the State. In 1984, the population of ring-billed gulls in the Great Lakes region was estimated at approximately 648,000 pairs (Blokpoel and Tessier 1986). Blokpoel and Tessier (1992) found that the nesting population of ring-billed gulls in the Canadian portion of the lower Great Lakes system increased from 56,000 pairs to 283,000 pairs from 1976 through 1990.

Ring-billed gulls are considered a species of lowest concern in BCR 14 and BCR 30 which includes Maine (MANEM Regional Waterbird Plan 2006). Almost 41,000 ring-billed gulls are believed to breed in BCR 14. There are no known breeding colonies in BCR 30. CBC data from 1966 through 2008 shows a general increasing population trend for wintering populations of ring-billed gulls throughout the State (National Audubon Society 2002). In the eastern BBS region, the ring-billed gull population is also showing an increasing annual trend estimated at 1.8% since 1966 with the trend across all routes in the

United States estimated to be increasing at 2.6% annually which is statistically significant (Sauer et al. 2008). In the New England/Mid Atlantic region, the number of ring-billed gulls observed along routes surveyed during the BBS has shown an increasing trend since 1966 estimated at 16.7% annually, which is a statistically significant trend (Sauer et al. 2008).

The PBR model developed by the USFWS to estimate allowable take levels for those gulls species address in the EA predicts ring-billed gulls in BCR 14 and BCR 30 could sustain a harvest of 3,065 individuals and maintain current population levels. If WS lethally takes 400 ring-billed gulls and if the take of ring-billed gulls under depredation permits from 2003 through 2007 is indicative of future lethal take in the northeastern United States by all entities, the total take of gulls in BCR 14 and BCR 30 would have ranged from 1,178 gulls to 1,789 gulls with an average take of 1,480 gulls which is below the take level predicted by the PBR model that would cause a decline in the population. Even if the proposed take of up to 400 ring-billed gulls is combined with the highest level of take of ring-billed gulls in the northeastern United States that includes BCR 14 and BCR 30, the overall take would be below the level where a population decline would occur from the proposed take of up to 400 gulls based on the PBR model. WS' take and all known take in the northeastern United States since 2003 has not reached a level that indicates an adverse impact to ring-billed gull populations has occurred. In addition, based on the model, the proposed annual take of ring-billed gulls at the level analyzed in the EA would not reach a level where an undesirable decline in the population would occur.

No exact population estimates are available in Maine for ring-billed gulls. Thus, based on the best available information for the regional gull populations, WS' annual removal of up to 400 gulls would reduce the estimated regional population of 54,000 gulls by less than 1.0% annually. Since population trends continue to indicate an increasing ring-billed gull population, the population of ring-billed gulls in the region and in Maine is likely greater than 54,000 gulls since the population estimated for the PBR is considered a minimum population (N_{\min}).

WS may employ nest removal, including eggs, as a method to address damage by ring-billed gulls. Nest removal is not used by WS as a population control method. This method is used by WS to inhibit nesting in an area where damage or threats are occurring due to the nesting activity and is intended to relocate a nesting pair or colony of gulls to an area where there are no conflicts. There may be occasions when nest treatment, addling, or oiling the eggs and allowing the nesting pair to return to the nest for continued incubation, may be preferable to nest removal. Total nest take at a site is determined by the highest number of active nests with eggs removed and destroyed or treated on a single day during the nesting season. All nests re-built up to the peak and all the nests re-built after the peak are considered re-nests for purposes of reporting the number of nests destroyed to the USFWS.

With management authority over migratory birds, the USFWS could impose stricter take limits if warranted based on population data. The USFWS, as the agency with migratory bird management responsibility, could impose restrictions on depredation harvest as needed to assure cumulative take does not adversely affect the continued viability of populations. This should assure that cumulative impacts on ring-billed gull populations would have no significant adverse impact on the quality of the human environment.

Herring Gull Population Impact Analysis

The population of herring gulls in the southern New England and Mid-Atlantic Regions was estimated at approximately 66,000 breeding pairs (MANEM Regional Waterbird Plan 2006). Herring gulls have decreased approximately 38% in the same area between 1970 and into the 1990s (MANEM Regional Waterbird Plan 2006) although the statewide population of breeding herring gulls has increased slightly over the past 15 years in Maine. In 1990, the statewide population of herring gulls was estimated at

27,000 breeding pairs (Pierotti and Good 1994). Currently, the MDIFW estimates the number of breeding population at approximately 28,290 breeding pairs on 183 coastal islands for the State of Maine (B. Allen, MDIFW, pers. comm. 2006).

According to the MANEM Waterbird Conservation Plan, herring gulls are considered a species of low concern in North America (MANEM Regional Waterbird Plan 2006). Almost 91,000 herring gulls are believed to breed in BCR 30. Of those herring gulls, over 75,000 gulls occur in the Gulf of Maine, which includes all of coastal Maine where herring gull nesting is known to occur. In addition, over 196,000 herring gulls are believed to breed in the BCR 14 which includes most of Maine (MANEM Regional Waterbird Plan 2006).

CBC data gathered in Maine from 1966 through 2008 indicates the number of herring gulls observed during the survey has shown a declining trend in the State (National Audubon Society 2002). Data available from the BBS indicates the number of herring gulls observed during the survey are showing a statistically significant trend downward in Maine estimated at -2.5% since 1966 (Sauer et al. 2008). A similar downward trend is occurring across BBS routes in the United States estimated at -2.1% annually since 1966. BBS data currently indicates a declining population in the northeastern United States (USFWS Region 5) estimated at -0.5% annually since 1966 (Sauer et al. 2008). Existing BBS survey routes and coastal counts of nesting herring gulls may not sufficiently take into account the change in nesting behavior from islands to rooftops exhibited by numerous nesting herring gull pairs.

Based on the model, an allowable harvest of up to 16,725 herring gulls in BCR 14 and BCR 30 would maintain current population levels in those two regions. The take of herring gulls also occurs by other entities through depredation permits issued by the USFWS and the MDIFW. In the northeastern United States (USFWS Region 5), the average annual reported take of herring gulls from 2003 through 2007 has been 3,171 herring gulls by all entities issued depredation permits by the USFWS. Herring gull take by all entities in the northeastern United States has ranged from 2,117 gulls to a high of 3,911 gulls taken under depredation permits issued by the USFWS between 2003 and 2007. Based upon the PBR model, the average annual take of herring gulls in USFWS Region 5 has been below the level of take that would lead to a population decline. To maintain current herring gull populations, the PBR model estimated the allowable harvest of herring gulls in BCR 14 and BCR 30 was over 16,000 gulls annually. With $F_R = 0.5$ (recovery factor), the PBR predicted 8,360 herring gulls could be harvested annually in BCR 14 and BCR 30 which would likely lead to a population increase. The average annual take of herring gulls in the northeastern United States by all entities has been below the level where a population decline would occur based on the model.

The average annual take of herring gulls by all entities in the northeastern United States has averaged 3,171 gulls from 2003 through 2007. If up to 300 herring gulls were lethally taken by WS and the average take by all entities in the northeastern United States remains stable, the combined take would be 3,471 herring gulls. The take of 3,471 herring gulls is below the level predicted by the PBR that would cause a decline in the herring gull population in the northeastern United States. The take of herring gulls by all entities to alleviate damage or threats has ranged from 2,117 gulls to a high of 3,911 herring gulls from 2003 through 2007. If the range of gulls taken remains stable in the northeastern United States and if 300 gulls were taken by WS in Maine, the overall take by all entities would range from 2,417 to a high of 4,211 herring gulls which is below the level that would cause a decline in the breeding population of herring gulls based on the PBR model.

Known take of herring gulls is below the level that the PBR model predicts will cause a decline in the population in the northeastern United States from take permitted by the USFWS. The permitting of take by the USFWS and the MDIFW provides outside evaluation to ensure WS' take occurs within the

allowed limits to achieve desired population management objectives for herring gulls in Maine and the northeastern United States.

Impacts due to nest removal and destruction would have little adverse impact on the herring gull population regionally and in Maine. Gulls are a long lived species and have the ability to identify areas with regular human disturbance and low reproductive success which causes them to relocate and nest elsewhere when confronted with repeated nest failure. Although there may be reduced fecundity for the individuals affected when nest destruction activities occur, this activity has no long term effect on breeding adult herring gulls. Nest removal is not used by WS as a population management method. This method is used by WS to inhibit nesting in an area experiencing damage due to nesting activity and is intended to relocate a nesting pair or colony of gulls to an area where there are no conflicts. The destruction of up to 50 herring gull nests annually by WS would occur in localized areas where nesting occurs and would not reach a level where adverse affects on gull populations would occur. As with the lethal take of gulls, the take of nests must also be authorized by the USFWS and the MDIFW. Therefore, the number of nests taken by WS annually would occur at the discretion of the USFWS and the MDIFW. Take of nests would only occur at levels authorized by those agencies.

Great Black-backed Population Impact Analysis

In BCR 14, the breeding population of great black-backed gulls has been estimated at 115,546 gulls (MANEM Regional Waterbird Plan 2006). In BCR 30, the breeding population of great black-backed gulls has been estimated at 37,372 gulls (MANEM Regional Waterbird Plan 2006). The population of great black-backed gulls in the Gulf of Maine is approximately 44,000 breeding pairs (MANEM Regional Waterbird Plan 2006). Great black-backed gulls have increased about 39% across the entire 13 northeast state region from the 1970s through the 1990s (MANEM Regional Waterbird Plan 2006). In the United States, great black-backed gulls breeding populations have increased 109% from the 1970s to 1990s (MANEM Regional Waterbird Plan 2006). The Canadian Wildlife Service reports that the population figures for great black-backed gull populations in the Northeast (*i.e.*, along the St. Lawrence River) have increased in the last twenty years (Canadian Wildlife Service 2002). The statewide population of breeding great black-backed gulls has increased over the past 20 years in Maine. In 1984, the statewide population of great black-backed gulls was estimated at 11,500 breeding pairs (Good 1998). Currently, the MDIFW estimates the number of breeding pairs at approximately 15,800 on 231 coastal islands for the State of Maine (B. Allen, MDIFW, pers. comm. 2006).

CBC data gathered in Maine from 1966 through 2008 shows a stable population trend for wintering populations of great black-backed gull throughout the State (National Audubon Society 2002). BBS data indicates a declining population trend for great black-backed gulls breeding in Maine estimated at -6.6% annually since 1966 (Sauer et al. 2008). Across all routes in the United States, BBS data indicates populations are declining at an estimated rate of -2.5% annually since 1966 with similar declining estimates for the northeastern United States estimated at -2.7% (Sauer et al. 2008). However, BBS data compiled for the New England/Mid Atlantic BCRs show an increasing trend in the number of nesting great black-backed gulls estimated at 7.9% annually since 1966 (Sauer et al. 2008). From 1980 to 2007, data compiled from the BBS indicates the number of great black-backed gulls in the New England/Mid Atlantic BCRs has increased 8.7% annually (Sauer et al. 2008).

Great black-backed gulls are considered a species of lowest concern in BCR 30 and of low concern in BCR 14 (MANEM Regional Waterbird Plan 2006). Over 37,000 great black-backed gulls are believed to breed in BCR 30 with over 115,000 great black-backed gulls nesting in BCR 14. Of those, over 43,500 occur in the Gulf of Maine, which includes Maine. The breeding population goal for great black-backed gulls is between 137,626 to 168,210 gulls in BCR 14 and BCR 30 which is below the maximum (MANEM Regional Waterbird Plan 2006). To maintain the current population levels in BCR 14 and

BCR 30, the PBR model developed by the USFWS predicts take of 11,234 great black-backed gulls would not cause a decline in gull populations in BCR 14 or BCR 30. With $F_R = 0.5$ (recovery factor), the PBR predicted 5,614 great black-backed gulls could be harvested annually in BCR 14 and BCR 30 which would still allow those populations to increase.

From 2003 through 2007, the number of great black-backed gulls taken in the northeastern United States (USFWS Region 5) has ranged from 404 to 1,203 gulls with an average of 814 great black-backed gulls taken annually by all entities. The average annual take of great black-backed gulls in USFWS Region 5 by all entities authorized to take gulls through depredation permits is below the level of annual take required to maintain current population levels predicted by the PBR model. To cause a population decline, the PBR model estimates that nearly 17,000 great black-backed gulls would have to be taken annually in the region. According to the PBR model, the average annual take by all entities in USFWS Region 5 of 814 gulls is below the allowable harvest for great black-backed gull populations to increase. If WS' annual take reached 25 great black-backed gulls and if the take of great black-backed gulls remains similar to the take that has occurred from FY 2003 through 2007 in the northeastern United States, the combined take would not reach a magnitude that the PBR model predicts would result in a decline in the population of black-backed gulls in BCR 14 and BCR 30. The average annual take of great black-backed gulls in the northeastern United States has been 814 gulls taken. When combined with the annual level of take analyzed under the proposed action alternative, the combined take would represent nearly 840 gulls taken annually if the average take remains similar in the future. A combined take of 840 gulls would not reach the level of take that the PBR models estimates will cause a declining population in BCR 14 and BCR 30.

The destruction of up to 25 great black-backed gull nests annually by WS would occur in localized areas where nesting occurs and would not reach a level where adverse affects on herring gull populations would occur. As with the lethal take of gulls, the take of nests must also be authorized by the USFWS and the MDIFW. Therefore, the number of nests taken by WS annually would occur at the discretion of the USFWS and the MDIFW. Take by WS and other entities would only occur at levels authorized by those agencies.

Laughing Gull Population Impact Analysis

Laughing gulls can be found nesting along the coastal areas of BCR 14 and BCR 30 with most breeding colonies occurring in BCR 14 (MANEM Regional Waterbird Plan 2006). Over 200,000 laughing gulls nest along the coastal areas in BCR 30 and have been given a conservation rank of lowest concern (MANEM Regional Waterbird Plan 2006). In BCR 14, nesting laughing gulls are estimated at 2,704 gulls and have also been given a conservation rank of lowest concern (MANEM Regional Waterbird Plan 2006). The breeding population of laughing gulls in the 1970s was estimated at 129,768 laughing gulls in 63 colonies. In the 1990s, the breeding population had increased to 205,348 laughing gulls in 275 colonies which represented a 58% increase in regional abundance (MANEM Regional Waterbird Plan 2006). BBS trend data for laughing gulls in the Eastern BBS Region shows a statistically significant increasing trend estimated at 3.4% annually since 1966 (Sauer et al. 2008). In the northeastern U.S. (USFWS Region 5), BBS trend data shows an increasing trend estimated at 3.2% annually since 1966 (Sauer et al. 2008). No BBS data is currently available for Maine (Sauer et al. 2008). CBC data for laughing gulls observed overwintering in the State has shown a relatively stable trend since 1966 (National Audubon Society 2002). As of 2006, the MDIFW estimated the number of breeding pairs at approximately 3,541 on four islands for the State of Maine (B. Allen, MDIFW, pers. comm. 2007).

From 2003 through 2007, the lethal annual take of laughing gulls by all entities in the northeastern United States (USFWS Region 5) has ranged from 4,559 to 6,007 gulls with an average annual take of 5,341 laughing gulls. The PBR model for laughing gulls in BCR 14 and BCR 30 estimates that nearly 15,000

laughing gulls can be taken annually with no adverse affect on the current population. Current take levels from all known entities in the breeding range of laughing gulls has not exceeded the level of annual take that would cause a decline in the breeding laughing gull population based on the PBR model.

The PBR model is based on a minimal population estimate for laughing gulls in the northeastern United States. If WS takes up to 50 laughing gulls annually in Maine and the number of gulls taken from 2003 through 2007 is indicative of the number of gulls that could be taken in the future in the northeastern United States, then the total take of laughing gulls would range from 4,609 gulls to 6,057 gulls with an average annual take of 5,391 gulls. The highest level of take of laughing gulls estimated at 6,057 would represent 40.4% of the estimated take that could occur and still maintain gull populations in the northeastern United States.

The USFWS authorized the take of up to 2,000 nests in Maine in 2007 and 2008. If up to 50 nests were taken by WS annually and if the number of nests authorized to be taken by the USFWS remains stable, WS' take of up to 50 nests would increase the total nests taken by 2.5%. If the take of 50 nests had occurred by WS in 2008, the total take of nests would not reach the number of nests authorized to be taken by the USFWS. With management authority over gull populations, the USFWS and the MDIFW can adjust take levels, including the take of WS, to ensure population objectives for gulls are achieved. Consultation and the reporting of take by WS will ensure the USFWS and the MDIFW considers any activities conducted by WS.

Issue 2 - Effects on Non-target Species' Populations, Including T&E Species

Another issue often raised is the potential impacts to populations of wildlife that could be taken as non-targets during damage management activities. While every effort is made to minimize the risks of lethally taking non-target wildlife, the potential does exist for the unintentional take of non-targets during damage management activities. Since FY 2004, no non-targets are known to have been killed during previous gull damage management activities conducted by WS using an integrated approach. Methods available to address gull damage would be similar across all the alternatives. Therefore, risks to non-targets from the use of those methods would be similar across alternatives. The only method available under the proposed action that would not be available under any of the other alternatives would be the avicide DRC-1339. Although some risks to non-targets do occur from the use of DRC-1339, those risks are minimal when the product is used according to WS Directive 2.401 and in accordance with label guidelines. Based on information in the EA and WS' programmatic FEIS (USDA 1997), the use patterns of DRC-1339 would not pose increased risks to non-targets.

Under the no WS involvement alternative, WS would not be directly involved with any aspect of gull damage management; therefore, no direct impacts to non-targets would occur from WS. Under the technical assistance only alternative, WS could provide information on the proper use of methods and provide demonstration on the use of methods but would not be directly involved with using methods to alleviate gull damage or threats. Similar to the no WS involvement alternative, under the technical assistance alternative, if methods are applied as intended and with regard for non-target hazards, those methods would not adversely affect non-target species, including T&E species. If requestors are provided technical assistance but do not implement any of the recommended actions and takes no further action, the potential impacts to non-targets would be lower compared to the proposed action. If those persons requesting assistance implement recommended methods appropriately and as instructed or demonstrated, the potential impacts to non-targets would be similar to the proposed action. Methods or techniques not implemented as recommended or used inappropriately would likely increase potential impacts to non-targets. When employing direct operational assistance under the proposed action alternative, WS could employ methods and use techniques which would avoid non-target take as described in Chapter 3 of the

EA under the minimization measures and Standard Operating Procedures and those measures and procedures discussed in WS' programmatic FEIS (USDA 1997).

The ability to reduce negative impacts caused by gulls would be variable based upon the skills and abilities of the person implementing damage management actions under Alternative 2 and Alternative 3. If those methods available are applied as intended, risks to non-targets would be minimal to non-existent. If methods available are applied incorrectly or applied without knowledge of gull behavior, risks to non-target wildlife would be higher under any of the alternatives. If frustration from the lack of available assistance under Alternative 2 and Alternative 3 causes those persons experiencing gull damage to use methods that are not legally available for use, risks to non-targets would be higher under those alternatives. People have resorted to the use of illegal methods to resolve wildlife damage that have resulted in the lethal take of non-target wildlife (USDA 1997, White et al. 1989, USFWS 2001, Food and Drug Administration 2003). Under the proposed action alternative, those persons could request direct operational assistance from WS to reduce damage and threats occurring which increases the likelihood that non-target species will be unaffected by damage management activities.

Based on a review of the proposed action and methods available under the proposed action, WS has determined that the proposed action alternative as described would not likely adversely affect the listed species in Appendix D. This determination was based on the conclusions made by the USFWS during WS' consultation with the USFWS on WS' programmatic activities. The USFWS determined in the Biological Opinion (BO) that the management activities addressed were not likely to adversely affect those listed species addressed in the BO. WS has determined that the use of methods for the management of gull damage will have no effect on those T&E species or their critical habitats not included in the 1992 BO or their critical habitats, except for piping plovers and roseate terns. A Section 7 consultation was conducted with the USFWS Ecological Services field office in Maine regarding nest predator activities involving gulls to enhance the nesting success of piping plovers and roseate terns in Maine. USFWS concurred with WS' determination that activities related to gull damage management would not adversely affect roseate terns and piping plovers (L. Nordstrom, USFWS, pers. comm. 2009).

WS has obtained and reviewed the list of vulnerable or threatened and endangered species (see Appendix E in the EA) designated by the State of Maine and has determined that the proposed WS' activities will not adversely affect any species listed as vulnerable or threatened and endangered. The MDIFW concurs with this determination (G. Matula, MDIFW, pers. comm. 2008).

Issue 3 - Effects on Human Health and Safety

The threats to human safety of methods available would be similar across the alternatives since those methods would be available across the alternatives. However, the expertise of WS' employees in using those methods available likely will reduce threats to human safety since WS' employees are trained and knowledgeable in the use of those methods. If methods are used incorrectly or without regard for human safety, risks to human safety would increase under any of the alternatives that those methods could be employed. The EA determined that the availability of DRC-1339 under the proposed action would not increase risks to human safety from the use of the method under the alternative (USDA 1997). Although risks do occur from the use of DRC-1339, when used in consideration of human safety, the use of DRC-1339 does not pose additional risks to human safety beyond those associated with the use of other methods.

Issue 4 - Effects on Socio-Cultural and Economics of the Human Environment

Birds often provide aesthetic enjoyment to many people in the State through observations, photographing, and knowing they exist as part of the natural environment. Under all the alternatives, methods available

that could be employed are intended to make resources unavailable or unattractive. Therefore, the use of methods often results in the removal of gulls from the area where damage is occurring or the dispersal of gulls from an area. Since methods available are similar across the alternatives, the use of those methods would have similar potential impacts on the aesthetics of gulls. However, even under the proposed action alternative, the dispersal and/or take of gulls under the alternatives will not reach a magnitude that would prevent the ability to view gulls outside of the area where damage was occurring. The effects on the aesthetic values of gulls would therefore be similar across the alternatives and would be minimal.

Issue 5 - Humaneness and Animal Welfare Concerns of Methods Available

The issue of humaneness was also analyzed in detail in relationship to the alternatives. Since many methods addressed in Appendix B of the EA are available under all the alternatives, the issue of method humaneness would be similar for those methods across all the alternatives. As stated previously DRC-1339 is the only method that would not be available under all the alternatives. The ability of WS to provide direct operational assistance under the proposed action alternative would insure methods are employed by WS as humanely as possible. Under the other alternatives, methods could be used inhumanely if used inappropriately or without consideration of gull behavior. However, most methods, when used as intended, would be considered humane and when attended to appropriately, would not increase distress of gulls.

XIV. CUMULATIVE IMPACTS OF THE PROPOSED ACTION

No significant cumulative environmental impacts were identified from any of the three alternatives, including the proposed action. Under the proposed action, the lethal removal of gulls by WS would not have significant impacts on statewide gull populations when known sources of mortality are considered. No risk to public safety is expected when activities are provided and expected by requesting individuals in Alternative 1 and Alternative 2 since only trained and experienced personnel would conduct and/or recommend damage management activities. There is a slight increased risk to public safety when persons who reject assistance and recommendations and conduct their own activities, and when no assistance is provided under Alternative 3. However, under all of the Alternatives, those risks would not be to the point that the impacts would be significant. The analysis in this EA indicates that an integrated approach to managing damage and threats caused by gulls will not result in significant cumulative adverse impacts on the quality of the human environment.

XV. DECISION AND RATIONALE

Based on the analyses of the alternatives developed to address the issues and the need for action in the EA, including individual and cumulative impacts of those alternatives, the following decision has been reached:

Decision

I have carefully reviewed the EA prepared for this proposal. I find the proposed action alternative to be environmentally acceptable, addressing the issues and needs while balancing the environmental concerns of management agencies, landowners, advocacy groups, and the public. The analyses in the EA adequately addresses the identified issues which reasonably confirm that no significant impact, individually or cumulatively, to wildlife populations or the quality of the human environment are likely to occur from the proposed action, nor does the proposed action constitute a major federal action. Therefore, the analysis in the EA does not warrant the completion of an EIS.

Based on the analyses in the EA, the issues identified are best addressed by selecting Alternative 1 (proposed action/no action) and applying the associated measures discussed in Chapter 3 of the EA. Alternative 1 successfully addresses (1) gull damage management using a combination of the most effective methods and does not adversely impact the environment, property, human health and safety, and/or non-target species, including T&E species; (2) it offers the greatest chance of maximizing effectiveness and benefits to resource owners and managers while minimizing cumulative impacts on the quality of the human environment that might result from the program's effect on target and non-target species populations; (3) it presents the greatest chance of maximizing net benefits while minimizing adverse impacts to public health and safety; and (4) it offers a balanced approach to the issues of humaneness and aesthetics when all facets of those issues are considered. Further analysis would be triggered if changes occur that broaden the scope of gull damage management activities in the State, that affect the natural or human environment, or from the issuance of new environmental regulations. Therefore, it is my decision to implement the proposed action/no action alternative (Alternative 1) as described in the EA.

Finding of No Significant Impact

Based on the analyses provided in the EA, there are no indications that the proposed action (Alternative 1) will have a significant impact, individually or cumulatively, on the quality of the human environment. I agree with this conclusion and therefore, find that an EIS should not be prepared. This determination is based on the following factors:

1. Gull damage management as conducted by WS in the State is not regional or national in scope.
2. The proposed action would pose minimal risk to public health and safety. Risks to the public from many of the methods described in the EA were determined to be low in a formal risk assessment (USDA 1997).
3. There are no unique characteristics such as park lands, prime farm lands, wetlands, wild and scenic areas, or ecologically critical areas that would be significantly affected. Built-in measures that are part of WS' standard operating procedures and adherence to applicable laws and regulations will further ensure that WS' activities do not harm the environment.
4. The effects on the quality of the human environment are not highly controversial. Although there is some opposition to gull damage management, this action is not highly controversial in terms of size, nature, or effect.
5. Based on the analysis documented in the EA and the accompanying administrative file, the effects of the proposed damage management program on the human environment would not be significant. The effects of the proposed activities are not highly uncertain and do not involve unique or unknown risks.
6. The proposed action would not establish a precedent for any future action with significant effects.
7. No significant cumulative effects were identified through the assessment. The EA analyzed cumulative effects on target and non-target species populations and concluded that such impacts were not significant for this or other anticipated actions to be implemented or planned within the State of Maine.

8. The proposed activities would not affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places, nor would they likely cause any loss or destruction of significant scientific, cultural, or historical resources.
9. WS has determined that the proposed action will not likely adversely affect the listed species in Appendix D of the EA. This determination is based on the conclusions made by the USFWS during WS' consultation with the USFWS on WS' programmatic activities. The USFWS determined in the BO that the management activities addressed were not likely to adversely affect those listed species addressed in the BO. WS has determined that the use of methods for the management of gull damage will have no effect on those T&E species or their critical habitats not included in the 1992 Biological Opinion or their critical habitats, except for piping plovers and roseate terns. A Section 7 consultation was conducted with the USFWS Ecological Services field office in Maine regarding nest predators activities involving gulls to enhance the nesting success of piping plovers and roseate terns in Maine. The USFWS concurred with WS' determination that activities related to gull damage management would not adversely affect roseate terns and piping plovers (L. Nordstrom, USFWS, pers. comm. 2009).
10. The proposed action would be in compliance with all applicable federal, State, and local laws.
11. No significant cumulative effects were identified by this assessment or other actions implemented or planned within the area.

Rationale

The rationale for this decision is based on several considerations. This decision takes into account public comments, social/political and economic concerns, public health and safety, and the best available science. The foremost considerations are that: 1) gull damage management will only be conducted by WS at the request of landowners/managers, 2) management actions are consistent with applicable laws, regulations, policies and orders, and 3) no adverse impacts to the environment were identified in the analysis. As a part of this Decision, the WS program in Maine will continue to provide effective and practical technical assistance and direct management techniques that reduce damage.



Charles S. Brown, Director-Eastern Region
USDA/APHIS/WS
Raleigh, North Carolina

9/24/10

Date

XVI. LITERATURE CITED

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Appendix A

Responses to Comments

Comment 1 – Conflicts with wildlife arise from human behavior and land use

WS addresses the conflicts that often arise between wildlife and human behavior, including the use of land in the introduction to Chapter 1 (see Section 1.0 of the EA). The EA states “... *human populations have expanded and land has been transformed to meet varying human needs. As the landscape has been altered to meet human needs, wildlife habitat has been substantially changed. Those human needs often compete with wildlife and have inherently increased the potential for negative interactions between wildlife and people. Negative interactions between people and wildlife occur when wildlife cause damage to resources and threaten human safety. Some species of wildlife have adapted to, and thrive in, human altered habitats. Those species, in particular, are often responsible for the majority of the negative interactions between humans and wildlife. When negative interactions occur, people often seek assistance to manage damage to resources and to reduce threats to human safety associated with wildlife.*”

Both sociological and biological carrying capacities must be applied to resolve wildlife damage problems. The wildlife acceptance capacity, or cultural carrying capacity, is the limit of human tolerance for wildlife or the maximum number of a given species that can coexist compatibly with local human populations. Biological carrying capacity is the land or habitat’s ability to support healthy populations of wildlife without degradation to the species’ health or their environment during an extended period of time (Decker and Purdy 1988). Those phenomena are especially important because they define the sensitivity of a community to a wildlife species. For any given damage situation, there are varying thresholds of tolerance exhibited by those directly and indirectly affected by the species and any associated damage. This damage threshold determines the wildlife acceptance capacity. While the habitat may have a biological carrying capacity to support higher populations of wildlife, in many cases the wildlife acceptance capacity is lower or has been met. Once the wildlife acceptance capacity is met or exceeded, people begin to implement population or damage management, including lethal methods, to alleviate damage or address threats to human health and safety.

The USDA is authorized to protect agriculture and other resources from damage caused by wildlife. This function is carried out by the WS program. The primary statutory authorities for the WS program are the Act of March 2, 1931 (46 Stat. 1468; 7 U.S.C. 426-426b) as amended, and the Act of December 22, 1987 (101 Stat. 1329-331, 7 U.S.C. 426c). WS does not have the authority to determine what is or is not proper land use by individual landowners and does not have the authority to require landowners follow land use guidelines. Under the proposed action alternative and under Alternative 2 (technical assistance only alternative), WS could recommend habitat modifications and make other recommendations for managing habitat on property own by the person requesting assistance from WS. However, implementation of WS’ recommendation is responsibility of the property owner. In addition, the EA discusses efforts provided by WS to educate the general public about wildlife damage management which would be available under the proposed action alternative and under Alternative 2.

Comment 2 – Animals should not be killed for engaging in natural behaviors

As was discussed throughout the EA, WS’ personnel use a thought process for evaluating and responding to requests for assistance which is depicted by the WS Decision Model (WS Directive 2.201) and described by Slate et al. (1992). WS’ programmatic FEIS provides further discussion and examples of how the Decision Model is used to address damage and threats associated with wildlife (USDA 1997). WS’ personnel assess the problem and then evaluate the appropriateness and availability (legal and administrative) of strategies and methods based on biological, economic, and social considerations.

Following this evaluation, methods deemed to be practical for the situation are incorporated into a management strategy. After this strategy has been implemented, monitoring is conducted and evaluation continues to assess the effectiveness of the strategy. If the strategy is effective, the need for further management is ended.

Under WS Directive 2.101, preference is given to non-lethal methods when developing strategies to address requests for assistance with managing damage and threats associated with gulls when using the WS Decision Model. WS' personnel are frequently contacted after requesters have tried or considered non-lethal methods and found them to be impractical, too costly, or inadequate for effectively reducing damage. Since the objective is to alleviate or reduce damage and/or threats associated with gulls expeditiously (*i.e.*, in a timely manner) when requested, to prolong the time required to achieve the desired result through the use of methods that a cooperator has already tried or economically cannot afford to implement would not be prudent when damage caused by gulls is economically burdensome to the requestor or when gulls pose a threat to human safety.

The National Wildlife Research Center (NWRC) has been and continues to be a leading research facility in the pursuit and development of non-lethal methods to address wildlife damage and threats. Research conducted by the NWRC on avian repellents and nicafebazin has led to the registration of several products currently available to manage damage associated with wildlife. WS continues to be committed to using, pursuing, and developing non-lethal methods for resolving wildlife damage, including damage and threats associated with gulls. For example, WS addressed nearly 10,000 gulls in FY 2008 using non-lethal methods.

Although non-lethal methods can be effective in alleviating damage or reducing threats of damage, the use of those methods in all situations are not always effective. Research indicates that most animals habituate to non-lethal methods, such as aversive sounds or visual deterrents, because of the lack of a negative stimulus that is realized after repeated use of the method. Non-lethal methods are employed to disperse wildlife away from areas where damage or threats of damage are occurring, which often relocates those wildlife species to other areas. If those species are dispersed to areas where damage or threats of damage no longer occur, the use of those methods has been successful. If the use of non-lethal methods disperses wildlife to areas where they cause damage or pose threats at that location, then the use of non-lethal methods alleviated damage or threats in one area but resulted in damage occurring in another area. Non-lethal methods can also cause a large group of wildlife to disperse into smaller groups which can result in damage occurring at multiple locations.

The difference in human values regarding what does and does not constitute an appropriate response to wildlife damage, including the humaneness of the response was addressed in the EA. The effectiveness of methods available for use to manage damage or threats of damage associated with gulls was identified as an issue in the EA but was not addressed in detail for the reason given in the EA (see Section 2.3 in the EA). In addition, the aesthetic value of gulls was addressed in Issue 4 of the EA in Section 2.2 and Section 4.1. The humaneness and animal welfare concerns of methods available to manage damage or threats of damage were addressed under Issue 5 in Section 2.2 and Section 4.1 of the EA.

Comment 3 – Human behavior has caused gull reproductive rates to increase

The comment states the increases observed in gull conflicts and increases in gull populations are associated with human behavior, particularly the amount of available food sources that are associated with human activities, such as garbage at fast food restaurants and landfills or unused fish that is discarded by people catching lobsters. The EA addresses this in Section 1.2 under the need for action section. Gull attraction to landfills as a food source has been well documented (Mudge and Ferns 1982, Patton 1988, Belant et al. 1995, Gabrey 1997, Belant et al. 1998). Large numbers of gulls are attracted to

and use landfills as feeding and loafing areas throughout North America. In the northeastern United States, landfills often serve as foraging and loafing areas for gulls throughout the year, while attracting larger populations of gulls during migration periods (Bruleigh 1998). Landfills have even been suggested as contributing to the increase in gull populations (Verbeek 1977, Patton 1988, Belant and Dolbeer 1993).

As was stated under Comment 1 previously, WS does not have the authority to require policy changes governing the handling or restricting the amount of garbage produced by people nor how or when people discard unused fish from lobster boats. WS could provide technical assistance under Alternative 1 and Alternative 2 which would recommend the changes in the way garbage is collected or handled at landfills, for example, which may or may not be implemented by those persons requesting assistance. WS does not have the statutory authority to require systemic changes in human behavior that would result in a lowering of the reproductive rate of gulls that may be associated with the amount of garbage produced by people or how unused fish is discarded, for example.

Comment 4 – Train gulls to disassociate people as a source of food

The comment proposes an alternative where WS begin working with communities to “...control our garbage” and to train gulls to dissociate people as a source of food by limiting the amount of garbage society produces and by forcing the implementation of business practices to limit the availability of what garbage is produced by society to gulls as a food source. As has been stated previously, the discussion of this particular alternative is outside the scope of WS’ authority. WS does not have the authority to implement or require broad changes across society which would essentially limit current human activities.

However, Alternatives 1 and Alternative 2 in the EA would allow WS to provide information on practices and behaviors that those persons requesting assistance can implement to reduce the presence of gulls in the area where damages or threats of damages occur, which could include changes to cultural practices. WS only responds to requests for assistance when received from other entities. Therefore, WS does not possess the ability to impose changes on other entities that do not request assistance from WS to manage wildlife damage. WS only makes recommendations through technical assistance and whether those recommendations are implemented becomes the decision of those entities requesting assistance. WS does not have the authority to require those entities requesting assistance to implement recommendation made by WS.

Comment 5 – The threats of disease transmission associated with gulls is overstated

Threats to human safety associated with gulls were discussed in Section 1.2 of the EA. Risks to human safety posed by gulls are primarily associated with fecal matter deposited by gulls in areas where people could come into contact with those droppings. Gulls are known to pass pathogens encountered in their environment through their digestive tract which can be present in their fecal droppings. There are several pathogens involving gulls which may be contracted by humans; however, the risk of infection is believed to be low. The primary route of infection is through incidental contact with contaminated material. Direct contact with fecal matter is not a likely route of transmission of diseases unless ingested directly. Although intentional contact with feces is not likely, transmission can occur when people unknowingly contact and ingest contaminated material. Therefore, the risk to human health from diseases is low and a direct link of transmission from gulls to humans is difficult to determine, especially given that many pathogens occur naturally in the environment or can be attributed to contamination from other sources. The presence of disease causing organisms in gull feces increases the risks of exposure and transmission of zoonoses wherever people may encounter large accumulations of feces from gulls.

The absence of records of disease occurrence in Maine does not mean absence of risk but may only mean lack of reliable research in this area. Few studies are available on the occurrence and transmission of

zoonotic diseases in wild birds. Study of this issue is complicated by the fact that some disease-causing agents associated with birds, may also be contracted from other sources. WS works with cooperators on a case-by-case basis to assess the nature and magnitude of the wildlife conflict including providing information on the limitations about what we know regarding health risks associated with gulls. It is the choice of the individual cooperator to tolerate the potential health risks or to seek to reduce those risks.

As was stated in the EA and reiterated here, the risks to human safety from disease transmission to humans is very low but the ability for disease-causing pathogens to be present in gull feces and the likelihood of people encountering feces containing pathogens in public-use areas increases those risks. Therefore, the risks in the EA are not overstated and are not inaccurate.

Comment 6 – Lack of scientific information supporting the killing of gulls

The comment questions the effectiveness in killing gulls to alleviate damage or threats of damage when very little information is available to support that removing gulls through lethal methods actually reduces damages occurring or the reduces the threats of damage.

The effectiveness of gull damage management methods was identified as an issue in the EA but was not fully evaluated for the reasons provided in the EA. The discussion in the EA addressed the effectiveness of lethal and non-lethal methods (see Section 2.3 of the EA). As was described in the EA, when WS receives a request for assistance, the objective is to alleviate damage or reduce threats of damage. Most often, the damage or threat of damage has reached a level where people no longer tolerate the damage or threat of damage and seek assistance. Therefore, methods to resolve damage or the threat of damage must be employed in such a manner as to ensure timely resolution, in consideration of potential harmful effects on humans, target and non-target wildlife, and the environment. WS' personnel use a decision model to determine the appropriate methods when all those aspects are considered.

A common issue raised is that the use of lethal methods is ineffective because additional gulls are likely to return to the area, either after removal occurs or the following year when birds returns to the area to nest. This assumes gulls only return to an area where damage was occurring if lethal methods are used. However, the use of non-lethal methods is also often temporary which could result in gulls returning to an area where damage was occurring once those methods are no longer used. The common factor when employing any method is that gulls will return if suitable habitat continues to exist at the location where damage was occurring and gull densities are sufficient to occupy all available habitats. Therefore, any reduction or prevention of damage from the use of methods addressed in Appendix B of the EA, either lethal or non-lethal will be temporary if habitat conditions continue to exist. Therefore, any method that disperses or removes gulls from areas will only be temporary if habitat continues to exist the following year when gulls return to nest.

Dispersing gulls using pyrotechnics, repellents, or any other non-lethal method addressed in Appendix B of the EA often requires repeated application to discourage gulls which increases costs, moves gulls to other areas where they could cause damage, and are temporary if habitat conditions remain unchanged. Dispersing and the translocating of gulls could be viewed as moving a problem from one area to another which would require addressing damage caused by those gulls at another location. WS' recommendation of or use of techniques to modifying existing habitat or making areas unattractive to gulls is discussed in Appendix B of the EA. WS' objective is to respond to request for assistance with the most effective methods and to provide for the long-term solution to the problem using WS' Decision Model to adapt methods in an integrated approach to managing gull damage that is agreed upon by the cooperator.

Managing damage caused by gulls can be divided into short-term redistribution approaches and long-term population and habitat management approaches (Cooper and Keefe 1997). Short-term approaches focus

on redistribution and dispersal of gulls to limit use of an area where damage or threats were occurring. Short-term redistribution approaches may include prohibiting feeding, hazing with vehicles, and adverse noise, erecting access barriers such as wire grids or fences, and taste aversion chemicals (Cooper and Keefe 1997). Population reduction by limiting survival or reproduction, removing gulls, and habitat modification are considered long-term solutions to managing damage caused by gulls (Cooper and Keefe 1997).

Redistribution methods are often employed to provide immediate resolution to damage occurring until long-term approaches can be implemented or have had time to reach the desired result. Dispersing birds are often short-term solutions that move birds to other areas where damages or threats could occur (Smith et al. 1999, Gorenzel et al. 2000, Gorenzel et al. 2002, Avery et al. 2008, Chipman et al. 2008). For example, Chipman et al. (2008) found that crows could be dispersed from roost locations using non-lethal methods but crows would return to the original roost site within 2 to 8 weeks. The re-application of non-lethal methods was required every year to disperse crows from the original roost or from roosts that had formed in other areas where damages were occurring (Chipman et al. 2008). Some short-term methods may become less effective in resolving damage as a bird population increases, as birds become more acclimated to human activity, and as birds become habituated to harassment techniques (Smith et al. 1999, Chipman et al. 2008). Non-lethal methods often require a constant presence at locations when birds are present and must be repeated every day until the desired results are achieved which can increase the costs associated with those activities. For example, during a six-year project using only non-lethal methods to disperse crows in New York, the number of events required to disperse crows remained similar amongst years and at some locations, the number of events required to harass crows increased from the start of the project (Chipman et al. 2008). Long-term solutions to resolving bird damage often require management of the population (Smith et al. 1999) and identifying the habitat characteristics which attract birds to a particular location (Gorenzel and Salmon 1995).

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